

31 MAY 1983

MAJOR FEDERAL FACILITIES OUT OF COMPLIANCE

OR HAVING POTENTIAL HAZARDOUS WASTE

DISPOSAL PROBLEMS

REGION 6

This report was prepared to provide a brief summary of what are considered to be the most significant compliance problems at major Federal facilities in Region 6. The problems described are multi-media in that they include actual or potential problems in each of the three environmental media of AIR (SIP compliance), WATER (NPDES compliance) and HAZARDOUS WASTE (RCRA/CERCLA compliance). Individual facilities are listed in an approximate order of priority determined by the apparent magnitude of the facility's total contribution to pollution of the local environment, and the order was subject to the judgment of the writer as to relative magnitude between media.

1. KELLY AIR FORCE BASE, TEXAS

Problem Media - Water and Hazardous Waste

TX 5622
a. Water Problems - KAFB has recently had a problem with violations of the cadmium limit in their NPDES permit. The Base has made some in-house changes in the management and control of waste discharges into the dilute industrial waste sewer to the IWTP, which appear to have corrected the problem. Discharge monitoring reports (DMRs) showed "significant noncompliance" (SNC) for only one of the last three months of 1982, and that violation only barely met the SNC criteria.

KAFB chemical drum washing procedures were blamed for a major fish kill in Leon Creek in late 1981. Texas notified KAFB of their intent to litigate the incident, but they have not yet done so. EPA arranged a joint KAFB, TDWR and EPA meeting in December 1981 to review the fish kill incident and other apparent pollution control problems among the varied Base activities. Since that meeting KAFB has developed and implemented a chemical and waste handling regulation for base tenants and also has completed a study of IWTP needs and preliminary plans for plant improvements to provide BAT.

KAFB also previously spread dried sludge containing heavy metals on the ground in an area draining directly into Leon Creek. They have discontinued the spreading practice and now haul the sludge to an approved chemical landfill, but a question still remains about the potential for storm water runoff over the spreading area to carry leached metals into the stream. KAFB tested one sample of runoff water and reportedly found no detectable leaching of metals from the soil. The former sludge spreading area is also the proposed location for a large equalization basin and a pair of primary clarifiers to be built as a part of the planned IWTP improvements.

b. Hazardous Waste Problem - During an August 1980 visit to KAFB, EPA called attention to three inactive industrial waste disposal sites adjacent to Leon Creek, which had high potential for contaminant migration into the Creek or the ground water. We requested the Air Force to investigate these sites further and report on their findings. In August 1982, we received an Air Force report which indicates these sites are among at least 16 inactive hazardous waste sites at KAFB with moderate to high potential for contaminant migration into surface or ground waters. These include six former landfills, three chemical or oil disposal pits, three sludge spreading areas, three spill areas and a used chemical storage area. The report recommends additional physical investigations at these sites to determine if there is contaminant migration and what corrective measures may be necessary, but no additional word has been received from KAFB or the Air Force about the status or schedule of the follow-up investigations.

Texas is also considering legal action against KAFB for violation of RCRA and the Texas Solid Waste Act by failing to list all facilities used to store hazardous wastes in their "Part A" application for an interim status permit. The facilities not listed are part of the old domestic waste treatment plant and a waste "oil" pit.

2. TINKER AIR FORCE BASE, OKLAHOMA

Problem Media - Water and Hazardous Waste

OK 3646

a. Water problem - TAFB (1) has been violating their major industrial permit ever since it was issued in November of 1974, (2) is nearly six years past the statutory deadline for achieving BPT, and (3) has not yet fully achieved BPT. We have met and corresponded with TAFB and other Air Force representatives to discuss the TAFB needs and corrective measures and to try to accelerate accomplishment of needed improvements and compliance achievement. We recently negotiated a Federal Facility Compliance Agreement with TAFB which calls for achievement of compliance by May 1984, with limitations included in a new permit about to be issued. A major improvement project began construction in March 1982 on additional capability designed to ultimately provide "BAT equivalent" treatment. The Base also implemented some in-house process and operations changes which have resulted in a marked improvement shown in recent DMRs submitted by TAFB. In July 1980 the TAFB plant was out of compliance on a total of six pollutants. As of the end of December 1982, the plant is consistently showing compliance with the limits for all but two pollutants monitored (hexavalent chromium and phenols). The magnitude of the excursions for these two has also been reduced significantly, until recently. Unusually high phenol discharges reported in March precipitated an enforcement conference with TAFB on April 29, 1983, to prompt correction of the phenol violations. TAFB agreed to immediate implementation of temporary measures to control and treat phenolic waste loads on the IWTP and to bring phenol levels in the plant discharges into compliance with permit limits in the interim prior to the "BAT" treatment improvements becoming operable.

b. Hazardous waste problem - An Air Force report on initial investigations into past hazardous waste disposal practices indicates that TAFB has several disposal sites with moderate to high potential for migration of contaminants into surface or ground waters. Five former landfills and two abandoned industrial waste pits are included among these sites. The Base has done some groundwater monitoring with test wells at one of the landfills, which reportedly indicates no measurable contaminant migration. The Air Force report recommends additional physical investigations at the questionable sites to determine the existence and magnitude of contaminant migration and required corrective measures. No information has been received yet from TAFB or the Air Force about the status or schedule of the follow-up investigations.

3. PINE BLUFF ARSENAL, ARKANSAS

Problem Media - Hazardous Waste

AR 710
Problem description - Army investigations of past activities and disposal practices at PBA have identified 29 sites on the reservation where various hazardous materials have been dumped or buried through the years and a former war gas production area where the buildings remain contaminated with the production chemical residues. One of the dump sites is in the former chemical manufacturing area, which is the proposed site for a future plant to produce one of the components of a binary nerve agent. PBA included projects in the Army's FY 1983 pollution control budget to remove and/or contain and close in place, as appropriate, the hazardous waste at this site and for the demolition and removal of the contaminated buildings. The Army's 1984 budget contains a similar project for the other 28 identified sites. EPA and State representatives have met with PBA, Corps of Engineers and Army contractors to (1) review plans for a landfill to receive soil and debris from the binary site and future production wastes, and (2) to provide guidance for a RCRA permit application for the landfill. PBA submitted a RCRA interim status application for hazardous waste disposal, which includes the problem sites as well as the new landfill and other disposal activities to be continued. A Part B application for a RCRA permit was also submitted to EPA in October 1982, and closure and post-closure plans for all the sites are to follow. A recent EPA RCRA inspection identified 6 sites which are definite hazards and 17 sites potentially hazardous to surface or ground water. These include the same sites identified by the Army and programmed for correction.

4. FORT POLK, LOUISIANA

Problem Media - Water

Problem description - The South Fort Polk Sewage Treatment Plant, which serves the Main Post of the installation, has been unable to operate within its NPDES permit limitations almost from the time the permit became effective in November 1974. A part of the problem is that Fort Polk's mission was expanded after the permit was issued, and the sewered population and sewage volume outgrew the treatment facilities. With two major expansions since then, the plant presently has theoretical design capability to provide

secondary level treatment for the current sewage load and to meet all the limits of the current permit. However, certain deficiencies in plant design, equipment and operation have prevented the expanded plant from achieving its design capabilities and producing the effluent quality specified in the permit. Fort Polk has been working under an Administrative Order for over two years to make corrections needed to meet permit conditions and may have finally achieved compliance. DMRs for the first quarter of 1983 are expected to confirm achievement.

Fort Polk's ultimate sewage disposal plan is to land treat the total STP discharge and eliminate effluent discharge to Bundicks Creek. In what was supposed to be the final phase of their plan, they constructed a group of "rapid infiltration" basins in another drainage area to provide land disposal of the STP effluent. These basins were able to infiltrate only about one-third of their design capacity, and their operation was suspended shortly after they were put into operation in 1981. The Army investigated alternative disposal plans to make best use of the basins and eventually proposed a plan to use them as holding or polishing ponds for the STP effluent. Ponds effluent is to receive additional land treatment by over-land flow through heavily-vegetated drainage swales or "baygalls" leading to Drake's Creek. Fort Polk, working closely with the State and EPA, has completed construction plans on the land treatment system and has been issued a short-term interim NPDES permit to cover an 18-months trial period, during which they will conduct extensive monitoring to establish a relationship between quality in the STP and ponds effluents and D.O. and nutrients in Drake's Creek.

Fort Polk also has a sewage force main which has broken nine times in the first three years of operation. They have been trying to correct the problem without replacing all or a large portion of the main. The Army has also tested pipe samples to determine if the problem may be due to faulty material. Their most recent attempt at correcting the problem was to install slow acting check valves near the lift station to relieve sudden pressure surges. These valves have been in use for about six months and no additional breaks have occurred.

5. LOUISIANA ARMY AMMUNITION PLANT, LOUISIANA

Problem Media - Hazardous Waste

LA 1929
Problem description - Shallow underground water contamination is resulting from LAAP's past practices of hazardous industrial wastes disposal. Initial Army investigations in 1979 showed evidence that 17 unlined wastewater ponds containing wastes from ammunition production (16 TNT "pink water" ponds), metal finishing/cleaning and paint stripping operations and two inactive landfills on-site are leaching contaminants such as hydrogen sulfide, TNT, DNT, RDX, Tetryl and lead into the shallow water aquifer under the Plant site. The Army reported their findings in a May 1980 meeting with interested Federal and State agencies and outlined plans for additional investigations to determine the extent of migration of the contaminants and

the potential threat to private water supply wells also utilizing the shallow aquifer. Additional wells have been drilled and tested to determine contaminant migration beyond the LAAP boundary and/or the extent of the migration on-post and whether it is continuing. We have just received an Army report on the latter investigations which reports that there is no apparent migration off post but some movement within the plant boundary. The report contains recommendations for corrective measures.

EPA's Solid and Hazardous Waste Research Division (SHWRD) at the Cincinnati MERL is presently working with the Army at LAAP on a remedial action research effort designed to demonstrate the effectiveness of a sludge treatment technique on the closure of one of the LAAP industrial waste ponds which could be applied to other similar lagoons and ponds. The demonstration project will be conducted under controlled operational conditions on the M-4 Lagoon (waste-water and sludge from a former cadmium electroplating operation) and will be designed to integrate with remedial and ponds closure work at LAAP's TNT pink water ponds and other Army research at similar lagoons elsewhere. The M-4 Lagoon closure-demonstration project is being closely coordinated by SHWRD and LAAP with the Louisiana DNR and EPA regional offices.

TX 10766
6. AIR FORCE PLANT NO. 4, TEXAS

Problem Media - Hazardous Waste

Problem description - In October 1982, Air Force discovered an oily leachate from an abandoned waste oil pit entering storm drainage eventually leading to Lake Worth, a source of water supply for the cities of Fort Worth and White Settlement. Air Force installed a temporary facility to contain, collect and dispose of the leachate and initiated further investigations into this and other abandoned waste sites to determine if contaminants were migrating into surface or ground water. Initial investigations indicated soil and upper groundwater contamination at several waste pits and other waste sites at the AFP. They also indicate that groundwater contamination may have migrated beyond the AFP property boundary and is a potential hazard to nearby municipal and domestic water supply wells and to Lake Worth. Air Force is now conducting additional groundwater investigations to determine extent of the migration and plans soon to remove contaminated earth from the various waste sites where migration is indicated. EPA Superfund program is assisting Air Force with off-site groundwater investigations and problem correction.

TX 5908
7. LONGHORN ARMY AMMUNITION PLANT, TEXAS

Problem Media - Hazardous Waste

Problem description - LAAP has three potential problem hazardous waste sites. One is a 23-acre former manufacturing area where TNT was manufactured during WWII and where the soil may be contaminated by "red water" residue subject to being carried by rainwater runoff or percolation into surface or ground waters. The other potential problem sites are (1) an unlined evaporation pond receiving washdown water from propellant loading

operations and (2) an abandoned landfill in which wastes from the former TNT plant were buried. The Army installed 22 monitoring wells around the latter two sites, and subsequent monitoring indicated a contaminant migration problem at the evaporation pond and a potential nitrate migration problem at the landfill. Additional samples were taken at the landfill, but information on the results hasn't been received yet by EPA. Current plans are to install a treatment plant for the propellant loading area waste water and close the pond. A study to characterize waste quality and volume going to the pond is under way, and the study results are to be used to determine future waste treatment processes and a method of closure for the pond. A study report is expected in mid-1983. Plans for the new treatment facilities will follow that report. At the TNT area, the Army is currently in the second, or monitoring, phase of its Installation Restoration Program (IRP) investigations, and the Phase II report recommending corrective measures is expected some time in June 1983. This report will also include recommendations for the abandoned landfill.

LAAP is also one of the potential sources of contaminants (PCBs, lead, cadmium, etc.) found recently in Caddo Lake during investigations conducted in connection with Section 404 dredging permit applications to the Corps of Engineers. As a result, EPA has notified the Army of our special interest in the results of their hazardous waste disposal investigations at LAAP. They have promised to expedite our receipt of their monitoring results to aid in the Caddo Lake study.

8. AIR FORCE PLANT NO. 83, NEW MEXICO

Problem Media - Hazardous Waste

Problem description - Recent EPA inspections at this Plant (AFP) have identified several problems with storage and handling of chemical waste materials. These problems have resulted in the discharge of hazardous wastes into surface drainage going into the San Jose Drain to the Rio Grande River, and there is a strong possibility they may also be contributing to contamination of an underground water supply source for the City of Albuquerque. The city's San Jose Well No. 6, and a nearby industrial water well, both located within a half mile of the AFP, were found to be contaminated with several suspected carcinogenic chemicals, including trichloroethylene and dichloroethylene. These solvents are, or have been, used in the AFP processes. State data from the S. Valley investigations indicates the AFP is a potential contributor to the groundwater contamination. EPA and Air Force representatives have met twice to discuss actions necessary to confirm AFP contaminant contribution and to correct it. Air Force has initiated Phase I of a four-phase IRP investigation and also proposed to enter a working agreement with EPA relative to investigations into off-site contamination coming from the AFP.

A RCRA Administrative Order, citing deficiencies in hazardous waste handling and storage, was also issued to the AFP. The plant has been making corrections, and a closeout of the A.O. is expected shortly.

9. McALESTER ARMY AMMUNITION PLANT, OKLAHOMAProblem Media - Water and Hazardous Waste

OK 1171
a. Water Problem - Recent inspection visits to MAAP identified some potential intermittent wastewater discharges not currently included in the NPDES permit. MAAP has since made application to EPA for permit modification to include these discharges, and the revised permit has gone to public notice.

b. Hazardous Waste Problem - This plant has several lagoons receiving industrial wastes from their ammunition production facilities. There is a possibility that various contaminants, including TNT and heavy metals, may be migrating from these lagoons through the soil into ground or surface waters. In cooperation with the State of Oklahoma, the Army installed 11 test wells around the lagoons and has been analyzing samples for about a year. Results of analyses indicate some migration, but monitoring wells arrangement does not allow for identification of problem ponds. Army sent a geologist to MAAP in September 1982 to evaluate the monitoring program and recommend improvements needed to determine where migrations are originating and corrections are needed. His evaluation report calls for additional wells and testing before a definite determination can be made. It was originally thought that these ponds are all active disposal ponds subject to RCRA permitting and regulation rather than to CERCLA or Superfund cleanup procedures. However, we have determined that some of the lagoons are part of the industrial waste treatment facilities covered under the NPDES permit, and not subject to RCRA permitting. Regardless of the applicable permit program, investigations into potential or actual groundwater contamination will continue, to determine the need for corrective measures.

10. KIRTLAND AIR FORCE BASE, NEW MEXICOProblem Media - Hazardous Waste

NM 1597
Problem description - Air Force initial investigations into past hazardous waste disposal practices and waste disposal sites at KAFB indicate KAFB has six inactive sites with moderate to high potential for contaminant migration into surface or ground waters. These include four former landfills, a radioactive waste burial site and the main Base Fire Training Area. The investigation report recommends additional soil and leachate investigations at each site to determine the existence and magnitude of contaminant migration and necessary corrective measures. An April 1983 report on status of DOD-wide hazardous waste sites investigations indicates a follow-up investigation is underway at KAFB to confirm whether contamination migration exists and to what extent. State investigations to date into Albuquerque's S. Valley groundwater pollution problems indicate that KAFB is not likely to be contributing to that problem.

11. McGREGOR NAVAL INDUSTRIAL WEAPONS PLANT, TEXASProblem Media - Hazardous Waste

Problem description - Recent Navy investigations into past hazardous waste disposal practices at the McGregor plant have identified two potential problem sites which require further investigation to determine the extent of the problems and appropriate corrective measures. The two sites are inactive and involve deposits of asbestos and DDT. The latter deposits were left by a private firm formerly leasing a part of the plant's production facilities to produce DDT. The Navy presented preliminary plans for proposed corrective action to State and EPA regional Superfund program representatives in a meeting at the Plant on September 22, 1982. State and EPA concurrence was given, and the Navy has been finalizing the closure plans. Work is expected to be completed about September 1984.

12. RED RIVER ARMY DEPOT, TEXASProblem Media - Hazardous Waste

TX5914
Problem description - Initial results from RRAD's groundwater monitoring system, installed in response to RCRA regulations, indicate apparent migration of contaminants from two areas of the installation where hazardous wastes are or were being deposited. The OTC (Ordinance Training Center) area contains three former burial sites, and the IWTP (Industrial Waste Treatment Plant) area contains two active industrial waste treatment ponds. RRAD met with Texas RCRA program representatives in Austin in June 1982, and presented their monitoring results in an Army Groundwater Assessment Report, which included recommendations for corrective measures, if deemed necessary. This meeting resulted in a mutual decision to postpone corrective measures and install additional monitoring wells to confirm whether corrective measures are necessary. RRAD obtained approval of the revised monitoring plan from the Texas Department of Health and implemented the additional monitoring required. Analytical results of the sampling have not yet been given to the State agency.

13. LONE STAR ARMY AMMUNITION PLANT, TEXASProblem Media - Hazardous Waste

TX5886
Problem description - Industrial wastewaters and sludges from past munitions manufacturing activities were disposed of in numerous pits and lagoons in production areas G, O, P, and Q. The pits and lagoons were all unlined and subject to overflowing and/or possible leaching of contaminants into surface or ground waters. Contaminants include TNT, RDX, lead and other heavy metals. Army field investigations indicated that subsurface soil surrounding the various disposal pits and lagoons is tight enough to prevent migration of contaminants through the soil to ground or surface waters. LSAAP initiated a program to contain and close all the lagoons and pits in place by dewatering, backfilling, and/or covering with an impervious soil cap. Closure work is complete on Areas O, P and Q. Closure work on Area G ponds began after the new treatment facility became operable in October 1982. However,

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wet weather has delayed the closure work. Completion, which requires only the addition of the top soil and seeding, is expected before September 1. Area G wastewaters are now being treated in the new treatment facility.

The Army advises that all the lagoons and pits will be registered as hazardous waste disposal sites to prevent future use and will be monitored by a system of test wells for any possible horizontal or vertical migration of the enclosed contaminants through the soil. LSAAP has applied for interim status as a disposer under RCRA to cover the interim before the closure work is completed.

Since the problem described above has essentially been corrected, this facility has been dropped from our list of problem Federal facilities.

14. LOS ALAMOS NATIONAL LABORATORY, NEW MEXICO

Problem Media - Water

Problem description - LANL has a single NPDES permit covering a total of 111 industrial and domestic waste discharges, most of which are minor low pollution potential discharges. Recent monitoring data received from LANL indicate all but four of the covered discharges are generally complying with the permit limitations. Information gathered in a September 1982 EPA visit to LANL indicates some of the planned correction projects were delayed for lack of funding, and the uncertainty of future funds made DOE reluctant to conclude an EPA-proposed Compliance Agreement until EPA changed some of the inflexible language. A new compliance schedule was furnished, which calls for all but one of the violating discharges to achieve compliance by September 1984. The remaining discharge is scheduled to achieve compliance in September 1985. The Agreement was revised to change the unsuitable language and incorporate the new schedule, and it has now been signed by both EPA and DOE.

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